

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
Entergy Nuclear Generation Co.)	Docket No. 50-293-LR
And Entergy Nuclear Operations, Inc.)	
(Pilgrim Nuclear Power Station))	August 11, 2011

**COMMONWEALTH OF MASSACHUSETTS MOTION TO SUPPLEMENT
BASES TO COMMONWEALTH CONTENTION TO ADDRESS NRC TASK
FORCE REPORT ON LESSONS LEARNED FROM THE RADIOLOGICAL
ACCIDENT AT FUKUSHIMA**

I. Introduction

The Commonwealth of Massachusetts (Commonwealth) hereby respectfully requests the Atomic Safety and Licensing Board (ASLB) to allow the Commonwealth to supplement the bases for its contention previously filed with the ASLB on June 2, 2011, which focuses on the lessons learned from the accident at the Fukushima Daiichi Nuclear Power Plant and their relevance for the Pilgrim Nuclear Power Plant relicensing proceeding. The Commonwealth makes this request because, since filing its contention, additional new and significant information on the impacts of relicensing the Pilgrim plant has become available which provides further support for its contention. That information is set forth in 1) the July 12, 2011 report of the Near Term Task Force established by the Nuclear Regulatory Commission (NRC) to evaluate the Fukushima accident and determine, in light of those lessons, whether the NRC's policies and regulatory practices

should be changed for U.S. nuclear power plants¹ and 2) the supplemental declaration of Dr. Gordon Thompson filed herewith,² in which Dr. Thompson comments on the Task Force Report as consistent with, and as providing additional support for, his earlier opinion submitted in this proceeding.³

Because the Task Force Report was not available at the time the Commonwealth filed its contention on June 2, 2011, the Commonwealth submits this supplemental expert declaration, supported by the NRC's own Task Force Report, as additional bases for its contention.⁴ The Commonwealth wishes to ensure that the ASLB, consistent with the National Environmental Policy Act (NEPA) and the Atomic Energy Act (AEA), has the opportunity to take a hard look at this new and significant information, before deciding whether to relicense the Pilgrim Nuclear Power Plant for an additional twenty years.⁵

¹ Recommendations for Enhancing Reactor Safety in the 21st Century, The Near Term Task Force Review of the Insights from the Fukushima Dai-ichi Accident (July 12, 2011), ADAMS No. ML111861807 (Task Force Report).

² Declaration of Gordon R. Thompson Addressing New and Significant Information Provided by the NRC's Near-Term Task Force Report on the Fukushima Accident (August 11, 2011) (Thompson Supplemental Declaration).

³ New and Significant Information from the Fukushima Daiichi Accident in the Context of Future Operation of the Pilgrim Nuclear Power Plant (June 1, 2011) (Thompson 2011 Report).

⁴ *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station) CLI-10-11, 71 NRC __, __ (slip op. at 19-20) (March 26, 2010) (the reach of a contention necessarily hinges upon its terms coupled with its stated bases).

⁵ This Motion also addresses the NRC's standards for admissibility of a contention. *See* Sections IV and V.

II. Task Force Report

The Commission established the Task Force to provide:

[a] systematic and methodical review of U.S. Nuclear Regulatory Commission processes and regulations to determine whether the agency should make additional improvements to its regulatory system and to make recommendations to the Commission for its policy direction, in light of the accident at the Fukushima Dai-ichi Nuclear Power Plant.

Task Force Report at vii.

In response, the Task Force assessed the risk posed by continued operation and continued licensing activities for U.S. nuclear plants, based upon currently available information on the Fukushima accident, and found that no “imminent risk” was posed by operation or licensing such that the U.S. plants should be shut down immediately. *Id.* at 18; *see also, Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-6, 43 NRC 123, 128 (1996) (finding no “imminent hazard” that would warrant shutdown of a reactor). The Task Force also concluded that U.S. reactors meet the statutory standard for security, *i.e.*, they are “not inimical to the common defense and security.” *Id.* at 18; *see also* 42 U.S.C. § 2133(d) (forbidding the NRC from licensing reactors if their operation would be “inimical to the common defense and security”).

Notably, however, the Task Force did not report – and could not report consistent with applicable law – a conclusion that the continued licensing of reactors such as the Pilgrim Nuclear Power Plant would satisfy NEPA, without first addressing the lessons learned from the Fukushima accident. As the Commonwealth has explained previously, the NRC should not make a final decision on whether to relicense the Pilgrim plant unless and until the NRC takes a hard look at the environmental impacts of relicensing, in light of the new and significant information identified by the Commonwealth’s expert

and in the Task Force Report on the lessons learned from Fukushima. *See* Commonwealth of Massachusetts Motion to Admit Contention, at 8, (June 2, 2011), *citing Marsh v. Oregon Natural Resources Council*, 490 U.S. 360 (1989); *see also Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), LBP-11-17, 71 NRC _ (July 14, 2011) (granting New York’s motion for summary disposition because NRC Staff had not demonstrated it took the requisite hard look at severe accident mitigation alternatives (SAMAs)).

Indeed, the Task Force set out a number of significant recommendations to change NRC policies and practices which should be considered in the Pilgrim relicensing proceeding, including changes to the regulatory system on which the NRC relies to make the safety findings that the AEA requires for licensing of reactors and to raise the level of safety that is minimally required for the protection of public health and safety:

In response to the Fukushima accident and the insights it brings to light, the Task Force is recommending actions, some general, some specific that it believes would be a reasonable, well-formulated set of actions *to increase the level of safety associated with adequate protection of the public health and safety.*

Id. at 18 (emphasis added). In particular, the Task Force found that “the NRC’s safety approach is incomplete without a strong program for dealing with the unexpected, including severe accidents.” *Id.* at 20. The Task Force also recognized that the great majority of the NRC’s current regulations do not impose mandatory safety requirements on severe accidents, and severe accident measures are adopted only on a “voluntary” basis or through a “patchwork” of requirements. *Id.*

The lack of a program for mandatory regulation of severe accidents is clearly evident from the regulations themselves. The Part 50 regulations, which establish fundamental safety requirements for all reactors (including the current generation and the

proposed new generation), are based on a “design basis” that does not include severe accidents. *Id.* at 15-16. The Task Force concluded:

While the Commission has been partially responsive to recommendations calling for requirements to address beyond-design-basis accidents, the NRC has not made fundamental changes to the regulatory approach for beyond-design-basis events and severe accidents for operating reactors.

Id. at 17.

Therefore the Task Force recommended that the NRC incorporate some potential severe accidents into the “design basis” and subject them to mandatory safety regulations. By doing so, the Task Force also effectively recommends a significant change in the NRC’s system for mitigating severe accidents through consideration of severe accident mitigation alternatives (SAMAs). As the Task Force recognizes, currently the NRC does not impose measures for the mitigation of severe accidents unless they are shown to be cost-beneficial or unless they are adopted voluntarily. Task Force Report at 15. The Task Force now suggests that some severe accident mitigation measures should be adopted into the design basis, i.e., the set of regulations adopted without regard to their cost which establish the minimum level of adequate protection required for all nuclear power plants. *Id.* at 18 and 20; *see also Union of Concerned Scientists v. NRC*, 824 F.2d 108, 120 (D.C. Cir. 1987). Thus, the values assigned to the cost-benefit analysis for Pilgrim SAMAs should be re-evaluated in light of the Task Force’s finding that the value of some SAMAs is so high that they should be required as a matter of course.

In support of and in parallel with its recommendations to upgrade the design basis, the Task Force proposed a series of specific safety investigations, design changes, equipment upgrades, and improvements to emergency planning and operating procedures. *See, e.g.,* Task Force Report at 69-70; 73-75.

III. Dr. Thompson's Supplemental Declaration

As noted in Dr. Thompson's Supplemental Declaration, the Task Force recommendations support and are consistent with those opinions previously provided by Dr. Thompson in support of the Commonwealth's June 2, 2011 contention:

1. Replace the "patchwork" of NRC requirements and voluntary initiatives with a "logical, systematic, and coherent regulatory framework" for design-basis and beyond-design-basis requirements. Thompson Supplemental Declaration ¶ II-3;
2. Rely upon prudent engineering principles, informed by cumulative direct experience on nuclear power plant accidents and accident precursors, as part of risk assessment and SAMA analysis. *Id.* at ¶¶ III-2 and III-3;
3. Upgrade water instrumentation and water makeup capability, and consider other mitigation measures, to reduce substantial conditional probability of a spent-fuel-pool fire. *Id.* at ¶¶ III-4 and III-5; ¶¶ III-10 and III-11;
4. Implement Task Force recommendations in a more transparent manner, which would reduce excessive secrecy that may degrade licensees' capability to mitigate an accident. *Id.* at ¶¶ III-6 and III-7;
5. Install hardened venting at the containment and other mitigation measures to reduce risk of hydrogen explosion. *Id.* at ¶¶ III-8 and III-9;
6. Install filtered venting for reactor containment to substantially reduce amount of radioactive material released to the atmosphere during an accident. *Id.* at ¶¶ III-12 and III-13.

Based upon his earlier opinion, and as further supported by the Task Force Report, Dr. Thompson concludes that the SAMA analysis for the Pilgrim plant, and the

Pilgrim-specific supplement to the GEIS for license renewal, should be redone. *Id.* at Section IV.

IV. NRC Contention Admission Requirements

In support of this Motion to supplement its contention with additional bases, and in satisfaction of the NRC's requirements for contention admission, the Commonwealth relies upon and incorporates by reference its filings submitted to the ASLB on June 2, 2011, including the filings which address the NRC's requirements for "late-filed" contentions,⁶ with the additional support as noted below.⁷

A. The Contention is Timely

Pursuant to 10 C.F.R. § 2.309(f)(2)(i)-(iii), the Commonwealth's contention meets the NRC's three-part standard for a timely contention. *See also* Commonwealth Motion to Admit Contention at 2-5.

⁶ Commonwealth of Massachusetts' Contention Regarding New and Significant Information Revealed by the Fukushima Radiological Accident (June 2, 2011); Thompson 2011 Report; Commonwealth of Massachusetts' Motion to Admit Contention and, if Necessary, to Re-Open Record Regarding New and Significant Information Revealed by the Fukushima Accident (June 2, 2011) (Commonwealth Motion to Admit Contention); Commonwealth of Massachusetts Petition for Waiver of 10 C.F.R. Part 51 Subpart A, Appendix B of, in the Alternative, Petition for Rulemaking to Rescind Regulations Excluding Consideration of Spent Fuel Storage Impacts from License Renewal Environmental review (June 2, 2011) (Commonwealth Waiver Petition).

⁷ By addressing these requirements, the Commonwealth does not waive its right to assert that NRC's "late-filed" and other contention standards cannot be applied to limit or bar the Commonwealth's right to a hearing on all issues material to licensing, including NEPA and AEA compliance based on lessons learned from the Fukushima accident, where the Commonwealth could not have previously raised these issues in this proceeding. *See* Commonwealth of Massachusetts Reply to the Responses of the NRC Staff and Entergy to Commonwealth Waiver Petition and Motion to Admit Contention or in the Alternative for Rulemaking (July 5, 2011) at 6 and cases cited.

1. Relevant Information Not Previously Available

The new and significant information providing additional bases for the Commonwealth's contention was not previously available because it is based upon the NRC's own Task Force Report (July 12, 2011) on the lessons learned from the accident at Fukushima, which was not yet released at the time the Commonwealth filed its initial contention (June 2, 2011). 10 C.F.R. § 2.309(f)(2)(i).

2. Information is Materially Different

The new and significant information providing additional bases for the Commonwealth's contention is materially different than information previously available because it is based upon the NRC's own Task Force Report (July 12, 2011) on the lessons learned from the accident at Fukushima, which was not yet released at the time the Commonwealth filed its initial contention (June 2, 2011). 10 C.F.R. § 2.309(f)(2)(ii).

3. The Contention is Timely

The Commonwealth submitted the additional bases for its June 2, 2011 contention in a timely manner. The NRC customarily treats contentions as timely if they are submitted within 30 days of the occurrence of the triggering event. *Shaw Areva MOX Services, Inc.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation) LBP-08-10, 67 NRC 460, 493 (2008). The Task Force Report was released on July 12, 2011, and the Commonwealth has filed its motion to supplement bases, based on the Report, within thirty days thereafter. 10 C.F.R. § 2.309(f)(2)(iii).

Therefore the additional bases for the Commonwealth's contention are timely.

B. The Contention Meets the Standard for Admission of Nontimely Contentions

In the event that the ASLB should decide that the contention is not timely, the Commonwealth's contention also satisfies a balancing of the NRC's late-filed contention criteria in 10 C.F.R. § 2.309(c)(1)(i)-(viii).

1. Good Cause

The Commonwealth satisfies the first and most important factor – “good cause” (10 C.F.R. § 2.309(c)(1)(i)) – because, as discussed above, its motion to supplement bases to its contention is timely because it has been filed within thirty days of issuance of the Task Force Report, on which this filing is based. Accordingly, the Commonwealth has good cause to submit the additional bases for its contention now.

2. 10 C.F.R. § 2.309 (c)(1)(ii)-(vii)

See Commonwealth Motion to Admit Contention at 6 - 8.

3. Extent to which the Commonwealth Will Assist in the Development of a Sound Record

The Commonwealth will assist in the development of a sound record because the supplemental bases for its contention are in turn based upon the NRC's own Task Force Report and the supplemental declaration of a highly qualified expert, Dr. Gordon R. Thompson, who comments on the Report regarding the lessons learned from Fukushima. Consistent with NEPA, this new and significant information will assist the ASLB in evaluating the Fukushima accident and provide a more complete record on which to base its decision on the environmental impacts of relicensing the Pilgrim plant. *See Commonwealth Waiver Petition at 24-25 (NRC regulations require supplementing EIS to address new and significant information).* Dr. Thompson is prepared to testify in a

hearing on the Commonwealth's contention, including the supplemental bases, and why this information is new and significant for the Pilgrim relicensing proceeding. 10 C.F.R. § 2.309 (c)(viii).

Accordingly, the Commonwealth has satisfied the test for nontimely contentions under 10 C.F.R. § 2.309(c).

V. The Commonwealth Satisfies the NRC's Standards for Reopening a Closed Hearing Record

Pursuant to 10 C.F.R. § 2.326(a)(1)-(3), the Commonwealth addresses the standard for reopening the record. The Commonwealth respectfully submits that the record must be re-opened in order to ensure that the NRC fulfills its non-discretionary duty to consider new and significant information revealed by the radiological accident at Fukushima, which bears on the environmental impacts of relicensing the Pilgrim nuclear power plant. *See* Commonwealth Petition for Waiver at 20-25.⁸

A. The Motion is Timely

For the reasons discussed above in Section IV.A, the Commonwealth's motion to supplement the bases to its contention is timely. *See also* Commonwealth Motion to Admit Contention at 10.

B. The Motion Addresses a Significant Environmental Issue

For the reasons discussed above in Sections II and III, the Motion addresses a significant environmental issue. *See also* Commonwealth Motion to Admit Contention at 10-11.

⁸ To avoid duplication, the Commonwealth references its earlier filings that address these standards. The Commonwealth also addresses these requirements without waiving its right to assert that they do not apply in this case. *See* Commonwealth Motion to Admit Contention at 10 and fn. 4.

C. The Motion Demonstrates that a Materially Different Result Would Be or Would Have Been Likely Had the Newly Proffered Evidence Been Considered Initially

For the reasons discussed above in Sections II and III, the Motion demonstrates that a materially different result would be likely. *See also* Commonwealth Motion to Admit Contention at 11.

D. The Commonwealth Has Justified the Admission of its Contention And the Granting of Party Status

As provided in 10 C.F.R. § 2.326(d), a motion to re-open the record which relates to a contention not previously in controversy among the parties must satisfy the requirements for nontimely contentions in § 2.309(c). For the reasons discussed above in Section IV.A, the Commonwealth's motion to supplement the bases to its contention is timely. *See also* Commonwealth Motion to Admit Contention at 10.

E. Dr. Thompson's Supplemental Declaration Supports the Commonwealth's Motion

As required by 10 C.F.R. § 2.326(b), this motion is supported by a declaration which sets forth the factual and/or technical bases for the Commonwealth's claims that the criteria of 10 C.F.R. § 2.326(a) have been satisfied. *See* Thompson Supplemental Declaration and Thompson 2011 Report. As demonstrated in his Supplemental Declaration and the Thompson 2011 Report, Dr. Thompson is a highly qualified expert who is familiar with the environmental analyses prepared by the NRC and the licensee which are relevant to the proposed re-licensing of the Pilgrim plant.

The information in Dr. Thompson's Supplemental Declaration meets the NRC's standard for admissibility of evidence, because it is relevant, material, and reliable. 10 C.F.R. § 2.337(a). Finally, the Commonwealth has specified the evidence in Dr.

Thompson's Supplemental Declaration on which it relies. Accordingly, the Commonwealth has satisfied the requirements of 10 C.F.R. § 2.326(b).

VI. Conclusion

For the foregoing reasons, the Commonwealth's motion to supplement the bases to its June 2, 2011 contention should be allowed.

Respectfully submitted,
Signed (electronically) by
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Dated: August 11, 2011

Certification:

On August 9, 2011, the Commonwealth notified all parties of record of its intent to make this filing. The NRC Staff and Entergy object to the filing.

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NUCLEAR REGULATORY COMMISSION**

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **Commonwealth of Massachusetts Motion to Supplement Bases to Commonwealth Contention to Address NRC Task Force Report on Lessons Learned from the Radiological Accident at Fukushima**, dated August 11, 2011, were provided to the Electronic Information Exchange for service on the individuals below:

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